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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/701,142	06/27/2001	Catherine Hedouin	022701-892	7739

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EXAMINER

WRIGHT, WILLIAM G

ART UNIT	PAPER NUMBER
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1754

DATE MAILED: 06/26/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/701,142

Applicant(s)

HEDOUIN ET AL.

Examiner

William G. Wright SR.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11 is/are allowed.
- 6) ☒ Claim(s) 1-10, 12-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 7.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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OK Claims 10 and 11 are objected to because of the following informalities: Claims 10 and 11 are objected to as being confusing in the "bringing" step found in the fourth line of each claim. The "sol" or "alkoxide" limitation is taught in the same line 4 of each claim but no metal is claimed to be a part of the "sol" or "alkoxide". It would appear that it is intended for a zinc "sol" or "alkoxide" to be used. The Examiner requests that clarification of this matter be addressed by the applicants. Appropriate correction is required.

O.K. Claim 1 is rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation added in the preliminary amendment dated June 27, 2001 of Paper No. 6, to claim 1 line 2, after "at" insert ~~at least~~ at is believed to be new matter. The limitation is not found at any other place in the specification. P.S.

OK Claims 3, 4 and 5 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s)

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in proper dependent form, or rewrite the claim(s) in independent form. Claim 3 recites the limitation "a specific surface area of at least 70 m²/g" in lines 3 and 4 of the claim. It appears to fail to further limit the surface area of claim 1. Claim 4 recites the limitation "a specific surface area of at least 50 m²/g in lines 3 and 4 of the claim. It appears to fail to further limit the surface area of claim 1. Claim 5 recites the limitation "a specific surface area of at least 50 m²/g in lines 4 and 5 of the claim. It appears to fail to further limit the surface area of claim 1.

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. § 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant

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is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. § 103(c) and potential 35 U.S.C. § 102(f) or (g) prior art under 35 U.S.C. § 103(a).

Claims 1-6 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Schoenthal et al. '803.

Schoenthal teaches the instant catalyst at column 2 line 10 et seq., column 4 line 35 et seq., Example 1 column 5 line 28 et seq. and in the claims of the reference. Example 1 of column 5 line 56 teaches a specific surface area of 108 m²/g and Example 3 column 6 line 8 teaches the surface area of 97 m²/g. Schoenthal teaches calcining at column 4 line 15 et seq. and in Example 1 column 5 line 52.

Schoenthal does not teach the exact calcining temperature and times of the instant claims.

The taught product has the instantly claimed surface area and therefore appears to be substantially identical, absent a showing to the contrary, In re Best, 195 USPQ 430.

Claims 1-5 and 12-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kintaichi et al. '145 in view of Chemical Abstract article 115:77073B.

Kintaichi teaches in a nitrogen oxide reduction process the utility of aluminates, to include zinc aluminate at column 5 of the reference. The process is taught to be performed in a system using the aluminate composition. The teaching of additives is found at column 4 line 40 et seq. The general teaching of the utility of high surface area being preferred is found at column 4 line 56 et seq. The method of making of the material is taught to be any conventional method at column 5 line 39 et seq. To include the alkoxide method with hydrolysis is taught at column 5 line 50 et seq. The teaching of optimum calcination temperature is found at column 6 line 24 et seq.

The Kintaichi reference lacks the specific teaching of the instant surface area as taught in the instant claims.

The Chemical Abstracts article teaches the utility of zinc aluminate as a catalyst. This catalyst is taught to have a high surface area of 290 m²/g.

The taught products have the instantly claimed surface area and therefore appears to be substantially identical, absent a showing to the contrary, In re Best, 195 USPQ 430.

Kintaichi teaches it is preferred to have a high surface area at column 4 line 56 et seq., thus providing a motivation to

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acquire a high surface area for the catalyst. The Chemical Abstracts article teaches in a zinc aluminate catalyst the feature of high surface area at $290 \text{ m}^2/\text{g}$. It would be obvious to one skilled in the art desiring a high surface area to use this teaching in the Chemical Abstracts article to arrive at the catalyst of the instant claims. It is desirable to have a high surface area due to catalysis being dependent on the reactants contacting the catalyst. Thus the need and desirability of a high surface area is well known in the catalyst art.

The instant claim 11 is allowed over the cited prior art. The instant claim 11 requires a process using a zinc salt, "sol" or "alkoxide" and an aluminum alkoxide. This mixture is hydrolyzed and thus forms a precursor composition, which may be calcined to form the aluminate. The cited prior art does not teach the claimed features of claim 11.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William G. Wright, Sr. whose telephone number is (703) 305-7792. The examiner can normally be reached on Monday through Thursday from 6:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can


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be reached on (703) 308-3837. The fax phone number for the organization where this application or proceeding is assigned are (703) 872-9310 for the regular communications and (703) 872-9311 for after final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-1495.



W. G. Wright, Sr.:cdc

June 23, 2003



**STEVEN BOS
PRIMARY EXAMINER
GROUP 1100**